IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OKLAHOMA

STATE OF OKLAHOMA, ex rel.
W. A. DREW EDMONDSON, in his
capacity as ATTORNEY GENERAL
OF THE STATE OF OKLAHOMA and
OKLAHOMA SECRETARY OF THE
ENVIRONMENT C. MILES TOLBERT
in his capacity as the TRUSTEE
FOR NATURAL RESOURCES FOR
THE STATE OF OKLAHOMA,

Plaintiffs

vs. 05-CV-0329 GKF SAJ

TYSON FOODS, INC., TYSON
POULTRY, INC., TYSON CHICKEN,
INC., COBB-VANTRESS, INC.,
AVIAGEN, INC., CAL-MAINE FOODS,
INC., CAL-MAINE FARMS, INC.,
CARGILL, INC., CARGILL TURKEY
PRODUCTION, LLC, GEORGE'S, INC.,
GEORGE'S FARMS, INC., PETERSON
FARMS, INC., SIMMONS FOODS, INC.,
and WILLOW BROOK FOODS, INC.,

Defendants

VIDEOTAPED DEPOSITION OF DANIEL STORM
Taken on Behalf of the Defendants
On September 23, 2008, beginning at 9:16 a.m.
In Oklahoma City, Oklahoma

APPEARANCES:

Appearing on behalf of the PLAINTIFF STATE OF
OKLAHOMA
Robert A. Nance, Attorney at Law
Kelly Burch, Attorney at Law
RIGGS, ABNEY, NEAL, TURPEN,
ORBISON & LEWIS
5801 N. Broadway, Suite 101
Oklahoma City, Oklahoma 73118
(405) 843-9909
rnance@riggsabney.com
Videographer: Stephen Carns
Reported By: Becky C. Dame, CSR, RPR

Exhibit 13

and the local conditions.

Q How does GLEAMS take that into account?

A It uses -- it takes into account the different soil properties. So it takes into account -- you know, some soils will have very high infiltration rates, other soils, not as much.

Q And does GLEAMS, also, as Dr. Engel has used it, take into account precipitation events?

A Yes. Yes. So you input, you know, rainfall sequences between there.

Q So is it your testimony that GLEAMS doesn't just look at edge of field, it actually performs an analysis of what happens inside the fence?

A I guess I don't understand.

Q Well, my understanding -- and tell me if I'm wrong -- but my understanding is that Dr. Engel's approach through GLEAMS is that he looks purely at the edge of field activities as opposed to an analysis of what's going on inside the fence.

A I'm not sure what you refer to as "inside the fence."

Q Inside a pasture.

A So the GLEAMS itself is a field scale model, and it looks at a field at a time, right? So

A Discretization?
Q Yeah. Spell it for me, too.
A D-i-s-c-r-e-t-i-z-a-t-i-o-n.
Q Okay. What does it mean?
A Breaking it up into pieces.
Q Will you agree that the whole purpose of watershed modeling activities is to try to reflect -- or try to -- yeah, reflect what's going on in the real world?
A Yes, sir.
Q And will you also agree with me that there's no model that's accurate?
A I don't -- I believe that would be incorrect.
Q Well, how do you measure the question of accuracy on the model?
A That's right. It's not an issue of whether one particular model is accurate or inaccurate. It's just a matter of degree.
Q Right.
A So it's a matter of accuracy. There's a number of different graphical and statistical methods used to evaluate the accuracy or how well a model actually performs, so one would be to visually compare model predictions to observe data in a

graphical sense. One would be to calculate statistical parameters that would characterize how well a model predicts compared to observed data.

Q And the comparison of the model output to observed data is a necessary prerequisite in order to determine accuracy of the model; isn't that true?

A Yes, that would be correct.

Q And it is also true that it would not be scientifically acceptable to validate through calibration?

A Please explain your question or rephrase. I don't believe what you're saying is --

Q Well, when you compare model output to observed data, is that called validation?

A All right. There's two processes that you go through when you're developing a model. The first would be calibration, the second would be validation.

Q Okay.

A So calibration is you use some observed data to modify model parameters to match the model predictions with the observed data, and once those particular parameters are set, they stay fixed, and you use an independent data set that was not used in the calibration process, and you run the model on

A Yes. Or for phosphorus.

Q For phosphorus.

Is the calibration of an in-stream, or routing model -- you use that term here as well. Is the calibration of the in-stream or routing model used in a watershed level modeling exercise an important step in the process?

A It comes back to what we were talking earlier. It depends on whether you're looking at total phosphorus and it depends on whether you need to proportion out the particulate and dissolve phases of the phosphorus. And then it also depends on whether the temporal distribution of that loading is important.

So if you're just interested in a long-term average total phosphorus loading, then the in-stream modeling becomes much less important. So, again, it depends on your objectives, what you need to look at.

Q Well, I assume it was important enough in your judgment for the purposes for which your report was done because you took the step to calibrate your model; correct?

A Oh, absolutely. And we were looking at the .037 -- at least the part of the report,